LUK'YANOV, F.N.

Automatic control of moisture in the rubber manufacture as a measure for preventing fires and explosions brought about by the accumulation of static electricity. Kauch.i rez. 20 no.7:34-38 Jl '61. (MIRA 14:6)

(Rubber industry--Safety measures)

LUK'YANOV, F.P. (Novocherkassk)

Approximate calculation of a thin-walled rod by means of a deformation diagram. Pril. mekh. 1 no.5:79-84 '65. (MIRA 18:7)

1. Novocherkasskiy politekhnicheskiy institut.

KADISOV, M.; LUK'YANOV, G.

Collected studies "Nuclear geophysics," edited by F.A.Alekseev. (MIRA 14:4)
Neft. khoz. 38 no.11:66-67 N '60.
(Nuclear geophysics) (Alekseev, F.A.)

USSR / Human and Animal Physiology. The Effect of Physical Factors. Ionizing Irradiations. T

Abs Jour: Ref Zhur-Biol., No 22, 1958, 102371.

Author : Kuznetsov, V. I.; Luk'yanov, G. A.
Inst : Not given.
Title : The Condition of the Cardio-Vascular System Under Chronic Effect of Ionizing Radiation.

Orig Pub: Voyen.-med. zh., 1957, No 5, 15-17.

Abstract: More than 300 people were clinically examined who were subjected to long-term irradiation in connection with their occupations. Discovered as basic were neurocirculatory dystonia of the hypotonic type with bradycardia and certain functional changes from the side of the cardiac muscle, neuroses with vasomotor reactions and leucopenia (5000 leucocytes in 1 mm^3). Among those who were periodically sub-

Card 1/2

USSR / Human and Animal Physiology. The Effect of Physical Factors. Ionizing Irradiations. T

Abs Jour: Ref Zhur-Biol., No 22, 1958, 102371.

Abstract: jected to alpha, beta, and gamma-rays in doses which exceeded 5-10 times the maximum allowable, pathologic effects were noted 2-2-1/2 times as frequently as among those who were irradiated with the maximum allowable doses. -- E. B. Gliksson.

Card 2/2

39745
S/115/62/000/007/007/008
E194/E455

26.2191

AUTHORS: Boshnyak, L.L., Byzov, L.N., Kaznacheyev, B.A., Luk'yanov, G.A.

TITLE: The calibration of turbine-tachometer flow meters

PERIODICAL: Izmeritel'naya tekhnika, no.7, 1962, 45-49

TEXT: Despite the simplicity of turbine-tachometer flow meters, equations for the motion for the indicator rotor remain approximate, mainly because the external load on the rotor is small and so peculiarities of rotor design or flow structure become decisive. Accordingly, generalized calibration curves are plotted experimentally on the basis of the theory of similarity. Previous work on this theory has introduced unnecessary complications on the one hand and has omitted important matters on the other. The initial and boundary conditions for the steady-state process are considered. The two simplest dimensionless criteria of similarity are

$$\Pi_1 = \frac{nd^3}{Q} \quad \text{and} \quad Re = \frac{\rho Q}{\mu d} \qquad (1)$$

where n - rotor speed; d - effective diameter; Q - flow rate;

Card 1/4

The calibration of ...

ρ - density; μ - viscosity. A relationship between Re and π_1 is inconvenient to use and so Re is replaced by its analogue which is obtained by multiplying Re by π_1

$$\pi_2 = \frac{\rho\, nd^2}{\mu} = \frac{nd^2}{\nu} \qquad (2)$$

The calibration curve is then obtained in the form of π_1 as function of π_2. For high flow-rates in particular, the boundary conditions must be extended because, for example, eddy-current losses in leads are proportional to the square of rotor speed. Accordingly, the following criterion is introduced

$$\pi_3' = \frac{k}{\rho Q d^2} \qquad (4)$$

In this equation k is a coefficient of proportionality, constant for a given design of tachometer, which depends on the magnetic field intensity, the dimensions of the current-carrying parts and the properties of their materials. It can be determined experimentally and then when working on liquids of

The calibration of ...

relatively low viscosity the following expression can be used

$$\pi_3 = \frac{\gamma_o Q_o}{\gamma Q} \qquad (6)$$

where γ_o is the specific gravity of the calibrating liquid used to determine the flow rate Q_o.
If the rotor is heavy, a further criterion π_4 must be introduced to allow for bearing friction. Tests were made with three different designs of flow meter, which are described. The tests were made at room temperature (18 to 20°C) using water, water-glycerine solutions and mixtures of benzene and of kerosene with oil grade CY (SU). The physical properties of the fluids varied within the following ranges: kinematic viscosity from 7 to 150 cm^2/sec, density from 0.7 to 1.2 g/cm^2. The tests were made with a special hydraulic rig in which measurements could be made under steady-state flow conditions measured to within $\pm$ 0.015. cm^3/sec whilst the frequency of the signal to the receiving instrument could be measured to an accuracy of $\pm$ 0.35 c/s.
Card 3/4

S/115/62/000/007/007/008
E194/E455

The calibration of ...

Calibration curves for the three flow meters are plotted. Individual points had a scatter of up to 3% mainly because of errors in determining liquid viscosity. For one design of flow meter the criteria π_1 and π_2 satisfactorily describe the effects on changing the viscosity but tests with the other two flow meters showed that with their design of generator the criterion π_3 is important. For these designs, above a certain critical value of π_2, changes of viscosity cease to influence the flow meter readings. The effects of various changes in flow-meter design are briefly described. It is concluded that the recommended calibration equations are satisfactorily confirmed by the experimental data. The work reveals prospects for designing turbine-tachometer flow meters which, within their working range, are insensitive to fluid viscosity and so to fluid temperature. If calibration curves are constructed for existing designs of turbine-tachometer flow meters, the readings may be corrected for fluid viscosity and density. Extensive work is required on the design of generators for turbine-tachometer flow meters. There are 5 figures and 1 table.

Card 4/4

L 45956-66 EWT(d)/EWT(l)/EWP(m) IJP(c) WW/AT

ACC NR: AP6018454 SOURCE CODE: UR/0051/66/020/006/1085/1086

AUTHOR: Gol'dfarb, V. M.; Il'ina, Ye. V.; Kostygova, I. Ye.; Luk'yanov, G. A.; Silant'yev, V. A.

ORG: none

TITLE: Population density of hydrogen levels in an argon-hydrogen plasma stream

SOURCE: Optika i spektroskopiya, v. 20, no. 6, 1966, 1085-1086

TOPIC TAGS: multicomponent plasma, supersonic nozzle, plasma generator, electron density, plasma electron temperature

ABSTRACT: Spectral emission of the argon plasma generated in the constant current plasmatron and flowing through a supersonic nozzle has been investigated. The electron density range was 10^{12} cm^{-3} to $3 \cdot 10^{15}$ cm^{-3} and electron temperature was 5000 to 2500°K. The spectrum was found to contain the lines of argon, hydrogen, recombination continuum and molecular bands of nitrogen (second positive system). The relative line intensity was determined by using Balmer lines for calibration. The spectrum was studied as a function of the radial position in the stream and the distance from the end of the nozzle. The population density of levels with principal quantum numbers n=4 and 5 increased with increasing distance to the axis and was found inverted at low electron densities. At the same time the n=3 and 4 as well as n=6 levels did not differ from

UDC: 533.9

Card 1/2

L 45956-66 0

ACC NR: AP6018454

the equilibrium distribution. Relative population inversion and change with radial distance is explained by the collisions of a second kind between hydrogen and argon atoms. The authors also note the interesting result that not only does simple inversion occur, but also at lower densities the condition for light amplification

$$n_5 > \frac{g_5}{g_4} n_4$$

(where g_4, g_5 are statistical weights of levels 4 and 5) is satisfied. Orig. art. has: 1 figure, 2 tables.

SUB CODE: 20/ SUBM DATE: 21Dec65/ OTH REF: 002

Card 2/2 blg

TETIOR, A.N., inzh.; LUK'YANOV, G.F., inzh.

Sodium sulfide plant in a pavilion-type building. Prom. stroi. 42 no.5:6-7 '65. (MIRA 18:8)

1. Ural'skiy Promstroyniiproyekt.

LUK'YANOV, G.F., inzh.

It is necessary to arrange the equipment for sulfuric acid manufacture on open platforms. Prom. stroi. 41 no.4:28-31 Ap '64. (MIRA 17:9)

LUK'YANOV, G.F., inzh.; LOBOV, O.I., inzh.

Double-superphosphate plant located in a pavilion-type building.
Prom. stroi. 42 no.12:34-37 D '64. (MIRA 18:3)

1. Ural'skiy Promstroyniiproyekt.

LUK'YANOV, Grigoriy Kondrat'yevich, starshiy mekhanik

Results of collective activity of prospectors. Izobr. i rats. no.1:31-32 Ja '59. (MIRA 12:1)

1. Trest "Uzgeolrazvedka," Tashkent.
(Prospecting)

LUK'YANOV, G.K.

Good condition of equipment is a guarantee of faultless operation. Avtom., telem. i sviaz' 9 no.4:33-34 Ap '65. (MIRA 18:5)

1. Nachal'nik otdela signalizatsii, tsentralizatsii, blokirovki i svyazi Tayginskogo otdeleniya Zapadno-Sibirskoy dorogi.

LUK'YANOV, G.M.

[Prevention of accidents at machine-tractor stations, and state and collective farms] Profilaktika travmatizma v MTS, sovkhozakh i kolkhozakh. Moskva, Medgiz, 1955. 33 p (MLRA 9:6)
(AGRICULTURE--SAFETY MEASURES)

AVALIANI, V.L., professor; LUK'YANOV, G.N., inzhener, redaktor.

[Drying beech with superheated steam] Sushka buka peregretym parom. V pererabotke G.N.Luk'ianova. Moskva, Goslesbumizdat, 1953. 61 p. (MLRA 6:9)
(Lumber--Drying)

LUK'YANOV, G.N., professor; VLASOV, G.R.; DATSYKOV, F.V. (Krasnodar)

Agricultural accidents and their prevention in the Slavyanskaya and Stalin Districts of Krasnodar Territory. Khirurgiia no.8: 50-54 Ag '54. (MLRA 7:11)

(AGRICULTURE,
accid. in Russia, statist. & prev.)
(ACCIDENTS,
agriculture, statist. & prev. in Russia)

Lukʹyanov, Georgiy Nikolayevich

EPT
.R92770

Profilaktika Travmatizma V Mts, Sovkhozakh I kolkhozakh
(Preventive Treatment of Injuries in Machine Tractor Stations, Sovkhozes and Kolkhozes)

Moskva, Medgiz, 1955

33 P. Tables (Bibliotaka Vracha-Organizatora)

LUK'YANOV, G.N., zasluzhennyy deyatel' nauki RSFSR prof. (Krasnodar).

Concerning A.M.Geselevich's article "On postamputation pains." (MIRA 14:3)
Ortrop.travm.i protez. 21 no.3:74-75 Mr '60.
(AMPUTATION) (PAIN) (GESELEVICH, A.M.)

LUK'YANOV, G.S., inzhener.

Placing of concrete. Biul.stroi.tekh.13 no.8:27 Ag '56. (MLRA 9:10)
(Reinforced concrete)

LUK'YANOV, I.

27-2-3/19

AUTHOR: Luk'yanov, I., Chairman of the Kalinin Sovnarkhoz

TITLE: The Training of Industrial Manpower Must be Improved (Uluchshat' podgotovku rabochikh kadrov dlya promyshlennosti)

PERIODICAL: Professional'no-Tekhnicheskoye Obrazovaniye, 1958, # 2 (153), pp 3-5 (USSR)

ABSTRACT: The schools of Labor Reserves, preparing skilled laborers for mechanical engineering and construction, are acting in close cooperation with the biggest industrial enterprises. The Trade School # 1 at Kalinin, attached to the RR car Plant, prepares the following specialists for its enterprise: Lathe operators, repairmen, tool makers, RR car assemblers, electricians, steam-hammer operators, molders and cabinet makers. In 1958 the school is to train 300 young qualified workers for the plant. To help in the training of these new laborers, the plant has assigned a building for training workshops and studies.

Trade School # 3 prepares, for the Kalinin Excavator Plant, lathe operators, repairmen, assemblers, tool makers, electri-

Card 1/3

cians, molders, founders and smiths.

Construction School # 2 trains masons, painters, plasterers, carpenters, and construction workers. At present 275 students are attending the school. All students get their professional training at construction sites of the Sovnarkhoz Construction Administration.

After pointing out the good professional qualifications of the young workers coming from the schools, the author speaks of those who do not comply with labor discipline, do not perform their duties conscientiously and do not fulfil their work norms. These deficiencies arise not only from omissions in the educational work, but also from poorly equipped training workshops, and lack of tools and technical equipment. Some plants are to blame for insufficient support in obtaining the necessary equipment. Furthermore the author mentions the poor qualifications of electro-welding and electro-gas welding operators, due to lack of training opportunities and apparatus. In some factories the administration does not pay the necessary attention to the education of young workers, particularly in the last stage of professional training.

In concluding the author mentions the technical training of workers in factories (Individual'no-brigadnoye obucheniye)

The Training of Industrial Manpower Must be Improved 27-2-3/19

at present performed by 5,000 persons. During the last year 13,000 workers raised their qualifications attending special courses, without interrupting their industrial production.

ASSOCIATION: Kalinin Sovnarkhoz (Kalininskiy sovnarkhoz)
AVAILABLE: Library of Congress

Card 3/3

LUK'YANOV, I., Geroy Sotsialisticheskogo Truda

Let's live in peace and friendship! Sov.profsoiuzy 7 no.22: 8-9 N '59. (MIRA 12:12)
(Russia--Foreign relations--United States)
(United States--Foreign relations--Russia)

LUK'YANOV, L. A.

"Agrobiological Principles for the Cultivation of Muscatel Sage." Cand Agr Sci, Voronezh Agricultural Inst, Voronezh, 1954. (RZhBiol, No 5, Mar 55)

SO: Sum. No. 670, 29 Sep 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

USSR N
CATEGORY : Weeds and Weed Control.

ABS. JOUR : Ref Zhur -Biologiya, No. 5 , 1959, No. 20591

AUTHOR : Luk'yanov, I.A.
INST. : ~~Alekseyev Zonal Experiment~~ Selection Station
TITLE : CIPC Control of Weeds in Dense Coriander Plantings.

ORIG. PUB.: V. sb.: Kratkiy otchet o nauchno-issled. rabote Vses. n.-i. in-ta maslichn. i efiromaslichn. kul'tur za 1956 g. Krasnodar, "Sov. Kuban'", 1957, 261-264

ABSTRACT : At Alekseyev Zonal Experiment Selection Station in dense coriander sowings isopropyl N-(3-chlorophenyl) carbamate (CIPC or Chloro IPC) was applied in does of 2, 4, 6 kg/ha. of active substance under presowing cultivation and 6 kg/ha. after sowing, three days before the appearance of shoots (the rate of the solution was 550 liter per ha.). As early as the 4-5 true leaf stage in the coriander, the main :

CARD: 1/3

CARD :

SUBJECT :

REF. JOUR.: Ref Zhur-Biologiya, No. 5, 1959, No. 20591

Author :
INST. :
TITLE :

ORIG. PUB.:

ABSTRACT : weed, bristlegrass, had begun to become stunted in growth. To a still greater extent had weeds of the goosefoot family suffered. The best dosage was 6 kg/ha. The mass of weeds was cut nearly in third by this dose and only slightly exceeded the mass of these particular weeds in the weeded control. The preparation did not display any detrimental action on the coliander. The application of the herbicide after planting and three days before the

CARD : 2/3

AUTHOR :

ABS. JOUR : Ref Zhur -Biologiya, No. 5, 1959, No. 20391

AUTHOR :
INST. :
TITLE :

ORIG. PUB.:

ABSTRACT : shoots began to appear, rather than under the cultivator proved more effective. The coriander yield boost was 2.5 - 3 centners per hectare, or by 40-50 percent. --L.D. Stonov

CARD: 3/3

LUK'YANOV, I.A., kand.sel'skokhozyaystvennykh nauk

Dormancy of slimy musc sage seeds. Agrobiologiia no.2:294-296 Mr-Ap '59. (MIRA 12:6)

1. Alekseyevskaya zonal'naya opytno-selektsionnaya stantsiya efiromaslichnykh kul'tur. (Sage)

KIM, Yu.Kh.; LUK'YANOV, I.A.; YAZYDZHAN, I.N., sadovod; SUL'MENEVA, Ye.M., starshiy tekhnik; ZHIL'TSOV, MI.I, starshiy master; KUZNETSOVA, P.G., inzh.-tekhnolog; ANISKOV, A.T., pirometrist; BELYAKOV, I.P., kalil'-shchik; NAUMOV, M.D., kalil'shchik

Let us create winter gardens in industrial plants with high temperatures. Zdorov'e 6 no.10:32 O '60. (MIRA 13:9)

1. Moskovskiy zavod shlifoval'nykh stankov. 2. Glavnyy metallurg Moskovskogo zavoda shlifoval'nykh stankov (for Kim). 3. Zaveduyushchiy zdravpunktom Moskovskogo zavoda shlifoval'nykh stankov (for Luk'yanov). (GREENHOUSES)

LUK'YANOV, I.A., kand. sel'skokhoz. nauk

Relationship between the size of fruit and essential oil content of coriander. Agrobiologiia no.6:936-938 N-D '63. (MIRA 17:2)

1. Alekseyevskaya opytno-selektsionnaya stantsiya.

ALEKSEYEVA, Ye.I., kand. sel'khoz. nauk; BUZINOV, P.A., kand. sel'khoz. nauk; VODOLAGIN, V.D.; VOLKHOVSKAYA, U.V.; GLUSHCHENKO, N.N., kand. biol. nauk; GURVICH, M.L., doktor biol. nauk; ZHELEZNOV, P.A., kand. sel'khoz. nauk; KSENDZ, A.T.; LESHCHUK, T.Ya.; LUK'YANOV, I.A., kand. sel'khoz. nauk; MAYCHENKO, Z.G., kand. sel'khoz. nauk; TANASIYENKO, F.S., kand. khim. nauk; ZNAMENSKIY, M.P.; PERSIDSKAYA, K.G.; PODLESNOVA, A.F.; ROGOCHIY, I.Ya.; REZNIKOV, A.R.; SHUL'GIN, G.T.; KHOTIN, A.A., doktor sel'khoz. nauk; LAPSHINA, O.V., red.; MINENKOVA, V.R., red.; MAKHOVA, N.N., tekhn. red.; BALLOD, A.I., tekhn. red.

[Aromatic plants] Efiromaslichnye kul'tury. Moskva, Sel'-khozizdat, 1963. 358 p. (MIRA 16:12)
(Ukraine--Aromatic plants)

LUK'YANOV, I. A.
Optics

Dissertation: "Dependence of the Temperature of Vitrification of Amorphous Bodies on the Rate of Heating." Cand Phys-Math Sci, Moscow City Pedagogical Inst, Moscow, 1953. (Referativnyy Zhurnal, Fizika, Moscow, Mar 54)

SO: SUM 213, 20 Sep 1954

LUK'YANOV, I.A.; MOSKVIN, V.M.

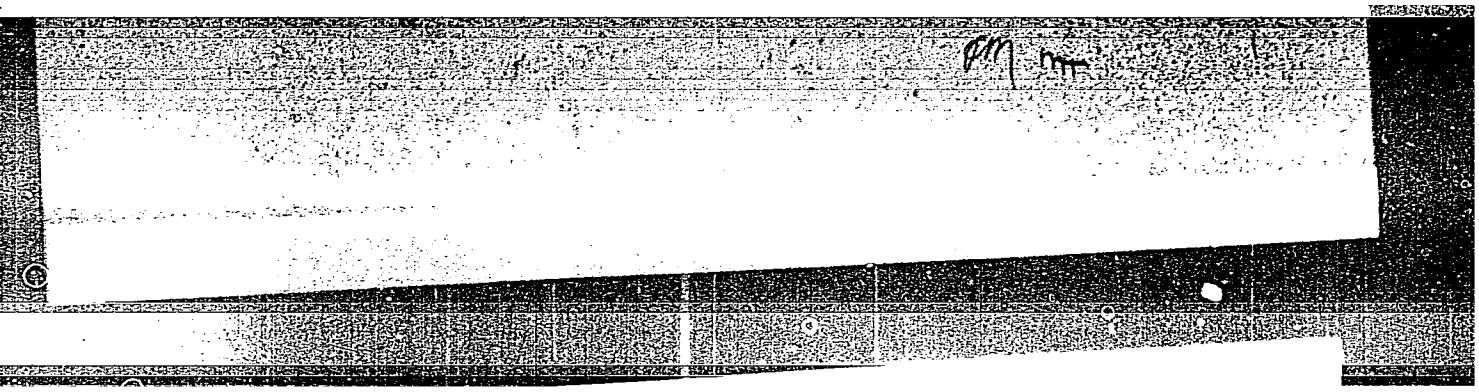
[Rapid determination of the grade of concrete] Uskorennoe opredelenie marki betona. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1953. 16 p. (MLRA 6:12)

1. Nauchno-issledovatel'skiy institut po stroitel'stvu.
(Concrete--Testing)

LUK'YANOV, I.A.

LUK'YANOV, I.A., kandidat tekhnicheskikh nauk; MOSKVIN, V.M., doktor tekhnicheskikh nauk.

Problem of determining grades of cement and concrete and the functions of building construction laboratories. Stroi.prom.32 no.2:41-43 F '54. (MLRA 7:2)
(Concrete)



APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001030820011-5"

LUK'YANOV, I.A.

USSR / Chemical Technology. Chemical Products and Their Application I-12

Silicates. Glass. Ceramics. Binders.

Author: ~~Abs Jour:~~ Bartenev G.M., Luk'yanov I.A.

Inst : Moscow City Pedagogical Institute

Title : Study of Vitrification Temperature of Silicate and Polymeric Glasses by the Method of Thermal Expansion

Orig Pub: Uch. zap. Mosk. gor. ped. in-t, 1956, 49, 145-162

Abstract: A study of the dependence of vitrification temperature on conditions of treatment, by the method of measurement of linear thermal expansion of a number of vitreous substances of organic and inorganic origin. Measurements were carried out by means of a quartz dilatometer of conventional type.

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USSR /Chemical Technology. Chemical Products and Their Application

Silicates. Glass. Ceramics. Binders.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31491

The samples to be measured were subjected to careful annealing, since in hardened samples a relaxation takes place, on approaching the region of anomalous temperatures, which greatly distorts the thermal expansion curve and makes it impossible to determine the vitrification temperature, in as much as structure relaxation becomes superposed over thermal expansion. The annealing temperature was adjusted 10-15° lower than Tg and the samples were held for 5 to 15 hours, after which they were cooled, at a rate of 0.1 degree/minute, for 20-30°, whereupon the rate of cooling was gradually increased to 0.5 degree/minute for 80-100°. Further cooling

Card 2/6

was effected with the furnace being turned off. Pressure of the spring against the sample was of 0.07-0.08 kg/cm^2. Change in pressure up to 2 kg/cm^2 has a slight effect on results of the determinations. For the study were chosen: rosin, polystyrene, poly-methylmethacrylate, boric anhydride and 5 varieties of silicate glass. The glasses were selected in such a manner as to cover a wide range of temperature of transition from vitreous to viscous-flow state (from 440 to 750°). In studying the temperature of vitrification the rate of heating was varied from 0.2 to 50 degree/minute. Vitrification temperature T_g was determined by the point of intersection of extrapolated

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31491

rectilinear portions of the expansion curve. It was found that in most cases, within the investigated range of rate of heating (3 order) - there exists a linear correlation between reciprocal temperature of vitrification and the logarithm of the rate of heating. This correlation is expressed by the formula: $1/T_g = C_1 - C_2 \lg W$, where W is rage of heating, C_1 and C_2 are constants. It was ascertained experimentally that the factors C_1 and C_2, appearing in this formula, are bound, in the case of various amorphous substances, by the correlation $C_2 \approx 0.031\, C_1$. This made it possible to transform the equation into a simpler one: $1/T_g = C_1(1 - 0.031 \lg W)$, which is

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Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31491

of great practical importance, since in order to determine the constant C_1 it is sufficient to know T_g at a standard rate of heating (3 degree/minute). On the basis of experimental data it was ascertained that the energy of activation of a given substance, in the case of almost all of the materials which were investigated, decreases linearly with increase of vitrification temperature, in accordance with the formula: $U = U_o' - aT$. Between zero energy of activation of the investigated substances and their temperatures of vitrification, there holds, on the average, the proportionality: $U_o' = 151\ T_g$ calorie/mole. This correlation emphasizes the fact that the temperature

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Silicates. Glass. Ceramics. Binders.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31491

of vitrification is determined by forces of intermolecular interaction, the magnitude of energy barriers which must be overcome by the particles to effect the transition from one position of equilibrium to another.

Card 6/6

S/191/63/000/001/013/017
B117/B180

AUTHORS: Bartenev, G. M., Gorbatkina, Yu. A., Luk'yanov, I. A.

TITLE: Thermal properties and methods of measuring thermal expansion, thermal capacity, and thermal conductivity of polymers

PERIODICAL: Plasticheskiye massy, no. 1, 1963, 56 - 64

TEXT: Methods and apparatus for studying the thermal properties of polymers are reviewed in a survey based on papers by Western and Soviet authors for the period 1903 - 1962. The following subjects are dealt with: (1) Measurement of thermal expansion by linear and volumetric dilatometers; (2) determination of thermal capacity by calorimeters; (3) study of the vitrification process on the basis of thermal expansion and capacity; (4) methods of measuring thermal conductivity and thermal diffusion. There are 11 figures, 4 tables, and 65 references.

Card 1/1

LUK'YANOV, I.A.

Mechanization and automation of production processes in the enterprises of the Moscow Economic Council. Mekh. i avtom. proizv. 18 no.11:22-26 N '64 (MIRA 18:2)

1. Predsedatel' Moskovskogo soveta narodnogo khozyaystva.

LUK'YANOV, I. N.

LUK'YANOV, I. N.

Study of Excess Play of D-54 Tractor Diesel Cylinders with the Aid of a Pneumatic Gauge." Min Higher Education USSR, Moscow Inst of Mechanization and Electrification of Agriculture imeni V. M. Molotov, Moscow, 1955. (Dissertation for the Degree of Candidate of Technical Sciences)

SO: M-972, 20 Feb 56

deceased

PAK, SEN UK, red.; MASAYTIS, V.L., red.; GOLOTA, Ye.V., red.;
LUK'YANOV, I.N., red.[deceased]; STERKIN, V.D., red.

[Geology of Korea. Translated from the Korean] Geologiia Korei. Moskva, Nedra, 1964. 262 p. (MIRA 18:1)

30099
S/057/61/031/011/014/019
B125/B102

24.2400 (1144,1482)

AUTHOR: Luk'yanov, K. I.

TITLE: Errors in simulation by means of a vibrating charged probe

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 11, 1961, 1358-1367

TEXT: The present paper deals with errors caused by a probe in the simulation of two-dimensional electrostatic fields by the method of induced current. The influence of the electrode boundaries (margin effect) can be neglected. A point charge q induces the current

$$i_{n.}(t) = q\omega S\left[\sum_{k=0}^{\infty}\frac{S^k}{k!}\frac{d^kE_s(s_0)}{ds^k}\sin^k\omega t\right]\cos\omega t =$$

$$= I_1\cos\omega t + I_2\sin 2\omega t + I_3\cos 3\omega t + \ldots \qquad (3').$$

The first harmonic of the induced current has the amplitude

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Errors in simulation...

$$I_1 = q\omega S\left[E_s(s_0) + \frac{S^2}{8}\frac{d^2E_s(s_0)}{ds^2} + \frac{S^4}{192}\frac{d^4E_s(s_0)}{ds^4} + \ldots\right]. \qquad (5).$$

For small S, $I_1 = q\omega SE_s(s_0)$ approximately holds. The device for recording the induced current is assumed to be sensitive only to the first harmonic. Then, the relative error δ, which arises when measuring $E_s(s_0)$, is $\delta = \left[(S^2/8)(d^2E_s(s_0)/ds^2\right]/E_s(s_0)$. When the amplitudes S of the charge oscillations increased by n times, δ is decreased by n^2 times. Errors are caused by the finiteness of the amplitudes, the distribution of the charge over the probe, and the influence of the dielectric of the probe. Generally, it is not correct to neglect the polarization of the probe. Only for a thin-walled tubular probe the influence of the volume density of the bound charges is weak. For massive probes, this influence may be roughly estimated. The calculations are carried out for the two-dimensional case of electrodes and cylindrical probes (Fig. 1, projected on the x-y plane). The probe is assumed to vibrate in the x-axis with the cyclic frequency ω. In this case, taking account of terms up to second

Errors in simulation...

order with respect to the small quantities $x - x_0$, $y - y_0$, and S, the first harmonic of the induced current is given by

$$I_1 = \omega S \int_l \Big[E_x(x_0, y_0) + \frac{\partial E_x(x_0, y_0)}{\partial x}(x - x_0) + \frac{\partial E_x(x_0, y_0)}{\partial y}(y - y_0) + \\ + \Big(\frac{S^2}{8} + \frac{(x - x_0)^2}{2} - \frac{(y - y_0)^2}{2} \Big) \frac{\partial^2 E_x(x_0, y_0)}{\partial x^2} + \\ + \frac{\partial^2 E_x(x_0, y_0)}{\partial x \partial y}(x - x_0)(y - y_0) \Big] \lambda dl. \qquad (11).$$

This expression gives information about the relative error when determining the x-th component of the field in the point (x_0, y_0). The following examples are calculated in detail: (1) a probe consisting of a thin plate, (2) the sides of a quadratic probe are homogeneously charged, (3) a circular probe with uniformly charged periphery, (4) only the right side of a quadratic probe is charged, (5) the upper and the right sides of a square probe are charged. For a probe oscillating in arbitrary

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direction. $I_1(\alpha) = q\omega S\left[E\cos(\alpha-\varphi) + (a/2)|\text{grad } E_x|\cos(2\alpha-\psi)\right]$ (25'). Therefrom, the relative error $\delta(\alpha) = \frac{a}{2}\frac{|\text{grad } E_x|}{E}\frac{\cos(2\alpha-\psi)}{\cos(\alpha-\varphi)}$. The error in the determination of the field direction is $\theta = -\frac{a}{E^3}\left[2E_xE_y\cdot\frac{\partial E_x}{\partial x} - \frac{\partial E_x}{\partial y}(E_x^2 - E_y^2)\right]$, which for $E_x = -kx$, $E_y = ky$, $k = \text{const}$ is reduced to $\theta = -2axy/(x^2 + y^2)^{3/2}$. For charges distributed symmetrically along the probe, the errors are much smaller than for highly asymmetrical distributions. The subject of the present paper was proposed by G. M. Gershteyn. There are 7 figures and 6 Soviet references.

ASSOCIATION: Saratovskiy gosudarstvennyy universitet, Kafedra radiofiziki
(Saratov State University, Department of Radiophysics)

SUBMITTED: January 16, 1961

Card 4/4

ORLOV, A.S., inzh.; LUK'YANOV, K.I., inzh.; KOZHEVNIKOV, Yu.M., inzh.

Organization of preparatory work in the assembly of the elements of a blast furnace at the Western Siberian Metallurgical Plant. Prom. stroi. 41 no.2:13-17 F '63. (MIRA 16:3)

(Blast furnaces)

LUK'YANOV, K.K.; SAL'MANOVICH, V.S.

Bipolarity of Wilson's leads. Trudy VNIIMIO no.3:115-119 '63
(MIRA 18:2)

LOSEV, N.T., inzh.; LUK'YANOV, K.V.

Device for measuring rock displacements. Ugol' Ukr. 7 no.7: 46-47 Jl '63. (MIRA 16:8)

(Subsidences (Earth movements)—Measurement)

LUK'YANOV, K.V.

Readers' response to the article by N.G.Rusakov "Reasons for the "delay" in the deformation of a coal seam before ejection and rock lump"; "Ugol'," 1963, No.4. Ugol' 39 no.1:66-67 Ja '64.
(MIRA 17:3)

1. Institut gornogo dela Sibirskogo otdeleniya AN SSSR.

Luk'yanov, L.I.

AUTHOR: None Given 5-6-13/42

TITLE: Chronicle of the Activity of the Geographical Section (Khronika deyatel'nosti geograficheskoy sektsii)

PERIODICAL: Byulleten' Moskovskogo Obshchestva Ispytateley Prirody, Otdel Geologicheskiy, 1957, # 6, pp 126-127 (USSR)

ABSTRACT: The following reports were delivered in the Geographical Section from 17 April to 3 May 1957:

M.K. Kachur on "Afforestationed Swamps of Central Meshchera"; L.I. Luk'yanov on the "Study of the Nature of Yunnan and South-Eastern Sikang"; M.N. Karavayev on "New Materials of James Cook's Expedition in the MGU Herbarium", and N.S. Mitrofanova on "Herbarium of the 18th Century in the Moscow University".

AVAILABLE: Library of Congress

Card 1/1

KAGAN, B.M., doktor tekhn. nauk; DOLKART, V.M., kand. tekhn. nauk; NOVIK, G.Kh., kand. tekhn. nauk; STEPANOV, V.N., inzh.; KANEVSKIY, M.M., inzh.; LUK'YANOV, L.M., inzh.; TANAYEV, M.Ya., inzh.; POLYAKOV, V.N., inzh.; KOL'TYPIN, I.S., inzh.; UL'YANOVA, Ye.K., inzh.; ADAS'KO, V.I., inzh.; MOLCHANOV, V.V., inzh.; VOITELEV, A.I., inzh.

The "VNIIEM-1" universal control computer. Elektrotekhnika 35 no.7: 4-10 '64. (MIRA 17:11)

LUK'YANOV, L. S.

LUK'YANOV, L. S. --"Formation of Vegetative and Generative Organs of Spring Wheat Depending on the Conditions of Growing."* (Dissertations For Degrees In Science and Engineering Defended at USSR Higher Educational Institutions)(29) Min Higher Education, Khar'kov Order of Labor Red Banner Agricultural Inst imeni V. V. Dokuchayev, Khar'kov, 1955

SO: Knizhnaya Letopis' No 29, 16 July 1955

* For the Degree of Candidate in Biological Sciences

KONOREV, N.M., inzh.; LUK'YANOV, L.S., inzh.

Gauge for placing buntons. Shakht. stroi. 6 no.5:25 My '62.
(MIRA 15:7)

1. Altayskiy gorno-metallurgicheskiy nauchno-issledovatel'skiy institut.
(Shaft sinking--Equipment and supplies)

LUK'YANOV, M., polkovnik

Be alert and do not betray our military and state secrets. (MIRA 14:8)
Komm.Vooruzh.Sil 1 no.3:77-82 N '60.
(Espionage)

LUK'YANOV, M., mayor

Communists are the promoters and guardians of lofty ethical principles. Komm.Vooruzh.Sil 3 no.22:48-53 N '62. (MIRA 15:12)
(Communist ethics) (Military discipline)

LUK'YANOV, M.; TERESHCHENKO, N.

For better labor organization in subsidiary operations. Sots. trud 8 no.6:69-73 Je '63. (MIRA 16:9)

1. Inspektor TSentral'nogo komiteta Kommunisticheskoy partii Ukrainy (for Luk'yanov). 2. Starshiy inzh. Gosplana UkrSSR (for Tereshchenko).
(Ukraine--Steel industry--Management)

DAYNEKO, Z.N.; LUK'YANOV, M.A.; LIVSHITS, N.Ya.

Return valves made from seamless steel pipes for steam lines.
Gidroliz. i lesokhim. prom. 9 no.7:24 '56. (MIRA 12:3)

1.Bobruyskiy gidrolizhnyy zavod.
(Valves)

LUK'YANOV, M.A.; GRINBERG, Kh.Z.

Manufacturing steam traps with available materials. Gidroliz. i lesokhim. prom. 9 no.8:26 '56. (MLRA 10:2)

1. Bobruyskiy gidroliznyy zavod.
(Steam traps)

LUK'YANOV, M.A.

Testing packing rings for high-speed valves designed by Gravinskii. Gidroliz. i lesokhim. prom. 14 no.6:28-29 '61. (MIRA 14:9)

1. Bobruyskiy gidroliznyy zavod.
(Bobruysk—Valves)

LUK'YANOV, M. F., Engineer

VKS Under the Council of Ministers USSR (-1946-)

"Currently Effective GOST' in Machine-Tool Building," Stanki I Instrument, 17, No., 12, 1946.

BR-52059019

LUK'YANOV, M. F. PA 34T43

USSR/Mechanics Aug 1947
Standards
Belts

"New Standards," M. F. Luk'yanov, 1½ pp

"Stanki i Instrument" No 8

This article summarizes the points of GOST 1284-45 for an all-union standardization of V-shaped drive belts. Presents various tables showing proposed standards.

34T43

LUK'YANOV, M. I.

25725 LUK'YANOV, M. I. Soderzhaniye vitamina Si Karotina V Tykvennykh Ovoshchakh. Sad i ogorod 1948, No. 7, S. 63-64.

SO: Letopis' Zhurnal Statey, No. 30, Moscow, 1948.

[illegible], [illegible]

"Prevention of the Spread of Potato Canker," Sad i Ogorod, no. [illegible], 194[illegible], pp. [illegible]

So: Sirs S1-90-53, 15 Dec. 1953

ALEKSANDROV, A.N., starshiy tekhnik; VILYANSKAYA, Ye.D., kandidat khimicheskikh nauk; GERASIMOV, P.N., inzhener; IVANOV, K.I., doktor khimicheskikh nauk; LUZHETSKIY, A.A., inzhener; LUK'YANOV, M.I., inzhener.

Testing the antioxidant VTI-8 in the oil systems of turbine installations. Elek.sta.27 no.6:14-19 Je '56. (MLRA 9:9)
(Antioxidants)

KACHURO, I.M.; BUGAREVICH, V.S.; GORYACHKO, N.I.; LINEVICH, A.V.; LUK'YANOV, M.I.; TORKAYLO, I., red.

[Basic and supplemental wages on collective farms] Osnovnaia i dopolnitel'naia oplata truda v kolkhozakh. Minsk, Izd-vo "Urozhai," 1964. 57 p. (MIRA 17:6)

1. Belorusskiy nauchno-issledovatel'skiy institut ekonomiki i organizatsii sel'skokhozyaystvennogo proizvodstva.
2. Chlen-korrespondent AN Bel.SSR (for all except Torkaylo).

BEL'GOL'SKI, Boris Petrovich, kand. tekhn. nauk, dots.; MEDVEDEV, Ivan Alekseyevich, kand. tekhn.nauk, dots.; STAROSEL'SKIY, Anatoliy Lazarevich, inzh.; LUK'YANOV, M.R., inzh., retsenzent; SEMENENKO, M.D., inzh., red. izd-va; STARODUB, T.A., tekhn. red.

[Ways to reduce the prime cost of rolling] Puti snizheniia sebestoimosti prokata. Kiev, Gostekhizdat USSR, 1962. 125 p. (MIRA 16:6)

(Rolling (Metalwork))--Costs)

KATSEN, Leontiy Grigor'yevich; LUK'YANOV, Mikhail Razumovich; APTEKAR', Saveliy Semenovich; TERESHCHENKO, N.A., inzh., retsenzent; CHUMACHENKO, T.I., red.izd-va; BEREZOVYI, V.N., tekhn. red.

[Labor productivity in ferrous metallurgy in the Ukrainian S.S.R.] Proizvoditel'nost' truda v chernoi metallurgii USSR. Kiev, Gostekhizdat USSR, 1963. 218 p. (MIRA 16:4)
(Ukraine--Iron industry--Labor productivity)

Q-3

USSR/Farm Animals, Swine

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 35684

Author : Luk'yanov M.S.
Inst : Not Given
Title : The Industrial Crossbreeding of Swine (Promyshlennoye skreshchivaniye svinoy)

Orig Pub : Svinovodstvo, 1957, No 8, 24-25

Abstract : The effectiveness of the industrial crossing of sows of the Large White breed with boars of the North Caucasian and Large Black breeds, as compared with the purebred Large Whites, was studied. Eight sows were used for testing. The fertility of the control group was 11.2, that of the North Caucasian hybrids was 11.0, and that of the crosses obtained from the Large Black boar was 11.1 baby pigs per farrowing. The average weight at the age of 2 months was (in kg.): 14.25, 16.07, and 13.80, respectively. At 2 months of age, 20 pigs from each group were taken for fattening. In the first period of fattening, the hybrids of the North Caucasian breed were

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Q-2

USSR/Farm Animals. Swine.

Abs Jour: Ref Zhur - Biol., No. 22, 1958, 101181

Author : Luk'yanov, M.S.

Inst : Azov-Black-Sea Agricultural Institute

Title : Effects Produced by Some Microelements Upon Fattening of Swine and Fertility Increases in Sows.

Orig Pub: Sb. nauchno-issledov. rabot. Azovo-Chernomorsk. s.-kh. in-t, 1957, 15, 251-255

Abstract: An experimental group of first generation piglet hybrids bred from sows of the Large White breed and boars of the North Caucasian breed received 0.2 mg of cobalt chloride, 0.3 mg. of zinc chloride, and 0.3 mg of manganese sulfate with their daily rations. The control group did not

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LUK'YANOV, M.V.

Electromyographic examination in disogenic cervical myelopathy.
Trudy 1-go MMI 38:259-276 '65. (MIRA 18:10)

LUK'YANOV, N.

We are introducing progressive work practices. Zhil.-kom. khoz. 8 no.12:18-19 '58. (MIRA 13:1)

1.Glavnyy inzhener Upravleniya kapital'nogo remonta zhilykh domov Lengorispolkoma, Leningrad.
(Leningrad--Apartment houses--Maintenance and repair)

LUK'YANOV, N.

Mixed repair brigades. Zhil.-kom.khoz. 9 no.11:19-21 '59.
(MIRA 13:2)

1. Glavnyy inzhener Upravleniya kapital'nogo remonta zhilykh domov Lengorispolkoma, Leningrad.
(Leningrad--Apartment houses--Maintenance and repair)

LUK'YANOV, N.

Rotating device for adjusting tower cranes. Zhil.-kom. khoz. 10 no.8:27-28 '60. (MIRA 13:9)

1. Glavnyy inzhener Upravleniya kapital'nogo remonta zhilykh domov Lengorispolkoma.
(Cranes, derricks, etc.)

LUK'YANOV, N.

Building a new industry. Mias.ind.SSSR 32 no.2:21-22 '61.
(MIRA 14:7)

1. Upravleniye myasnoy i pishchevoy promyshlennosti Kostromskogo sovnarkhoza.
(Kostroma Province—Meat industry)

LUK'YANOV, N.; ZAL'TSMAN, I.

Technology of producing stamped radiators. Na stroi. Ros. no.7:28-29 Jl '61. (MIRA 14:8)

1. Glavnyy inzhener Upravleniya kapital'nogo remonta zhilykh domov Lengorispolkoma (for Luk'yanov). 2. Direktor mekhanicheskogo zavoda Upravleniya kapital'nogo remonta zhilykh domov (for Zal'tsman).
(Leningrad--Sheet-metal work) (Radiators)

SNEGUR, N. (pos.Novogornyy, Chelyabinskaya obl.); MAYTAMA, I. (Komsomol'sk-na-Amure); ZADOROZHNYY, N. (Kurgan); LUK'YANOV, N.; TISHKIN, V. (Orlovskaya obl.); STEPIN, A.; KHANDOGIN, A.; LAPAYEV, Ye. (Volzhsk); OKULOVSKIY, A.; MANEROV, V.

Readers' letters. Pozh.delo 9 no.3:30 Mr '63. (MIRA 16:4)
(Fire prevention)

LUK'IANOV, N. A.

Issledovatel skie i proektnye raboty po vodnomu transportu Buriat-Mongol'skoi ASSR, /Surveying and project works for water transportation in the Buriat-Mongolian ASSR/. (In Problemy Buriat-Mongol'skoi ASSR. Moskva, 1935, v. 1, p. 308-310).
LC: DK771.B8K6 1934

SO: Soviet Transportation and Communication, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

LUK'IANOV, N. A.

Povysit' rol rechnogo transporta v gruzooborote strany. [To increase the participation of river transport in the general freight traffic.] (Rechnoi transport, 1945, no. 4-5, p. 1-5).

DLC: TC601.R4

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

LUK'YANOV, N.A.

Voprosy ekonomichnosti ispol'zovaniia rechnogo transporta. [Questions of economical utilization of river transportation]. (Rechnoi transport, 1949, no. 1, p. 3-7 and no. 2, p. 4-6). DLC: HE601.R4

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified

EGOROV, N. N., LUK'YANOV, N. A.

Broaching Machines

Keyway broach for small diameter holes. Stan. i Instr. 23, No. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952. Unclassified.

LUKYANOV, N. A.

Screw-Cutting Machines

Thread cutter for cutting outside and inside threads. Stan. i instr. 24, No. 3, '53.

Monthly List of Russian Accessions, Library of Congress
June 1953. UNCL.

L 30958-66 EWP(m)/EWT(1)/ETC(m)-6/EWA(d)/EWA(1) WW
ACC NR: AP6013196 SOURCE CODE: UR/0421/66/000/002/0047/0052

51
B

AUTHOR: Luk'yanov, N. A. (Moscow)

ORG: none

TITLE: The calculation of a mixed subsonic and supersonic gas flow in a plane pressure nozzle

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 2, 1966, 47-52

TOPIC TAGS: gas dynamics, gas flow, subsonic gas flow, supersonic gas flow, plane nozzle

ABSTRACT: A plane potential subsonic and supersonic flow of gas is analyzed without taking into account the viscosity and heat conduction. A particular solution, corresponding to the motion of a gas in a nozzle with a curvilinear sonic line, was obtained for the system of mixed elliptic-hyperbolic equations of motion in the potential plane. The accuracy of the simplifications used in the analysis was verified by exact calculations and experiments. The author thanks S. V. Fal'kovich for his worthwhile observations on the problem studied. Orig. art. has: 9 figures and 5 formulas. [AV]

SUB CODE: 21/ SUBM DATE: 21Dec65/ ORIG REF: 004/ ATD PRESS: 4240

Card 1/1 dc

ACC NR: AP7002537 (A,N) SOURCE CODE: UR/0413/66/000/023/0011/0011

INVENTORS: Gudkov, P. I.; Luk'yanov, N. A.

ORG: none

TITLE: A device for fastening of products. Class 7, No. 188939

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 11

TOPIC TAGS: mechanical fastener, sheet metal, metal forming machine tool

ABSTRACT: This Author Certificate presents a device for fastening of products. The device contains a casing with an immovable base and a movable pressure plate mounted within it. The pressure plate is supplied with a compressing mechanism. To provide for fastening and bending of a product made of sheet material and having various configurations and geometrical sizes, the device is supplied with a bending plate hinged to the casing. The pressure plate is made up of sections consisting of rotary levers. The levers are free along a common axis and may be moved independently along this axis.

SUB CODE: 14, 13/ SUBM DATE: 04Jul64

UDC: 621.981.12

Card 1/1

LUK'YANOV, N.F.

Magnetic amplifiers with a high-resistance input. Sbor.st.LITMO no.47:41-45 '59. (MIRA 16:10)

LUK'YANOV, N.G.

Materials on primary resistance to drugs in tuberculosis.
Zdravookhranenie 4 no.3:23-27 My-Je '61. (MIRA 16:7)

1. Iz Moldavskogo nauchno-issledovatel'skogo instituta tuberkuleza (dir.kand.med.nauk V.G.Sokol).
(TUBERCULOSIS) (BACTERIA, EFFECT OF DRUGS ON)

LUK'YANOV, N.G.

Chamber mining with roof support by removable bolts. Khim.prom. no.9:710-712 S '63. (MIRA 16:12)

1. Soligorskaya laboratoriya Vsesoyuznogo nauchno-issledovatel'skogo instituta galurgii.

9(5), 9(6) SOV/119-58-11-12/15

AUTHORS: Bankov, Ye. Ya., Engineer, Luk'yanov, N. G., Engineer, Eigenbrot, V. M., Engineer

TITLE: A System for the Automatic Control of the Utilization of Production Equipment (Sistema avtomaticheskogo kontrolya ispol'zovaniya oborudovaniya)

PERIODICAL: Priborostroyeniye, 1958, Nr 11, pp 27-29 (USSR)

ABSTRACT: A system for the automatic statistical control was developed by the NIO-PKB-12 for the "Mikroprovod" works, which produce enamelled wires; this system is characterized by the following:

1) Small number of auxiliary devices
2) Minimum number of cross-connections between the objects to be controlled and the counting points
3) Simplicity of transducers
4) Use of only one device for visual control with indication recording and integration with respect to time of simple means of production.

The number of objects to be controlled is limited only by the ratio between the resolving power of the scales of the

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control-device and the required control-accuracy. The influence exercised by a possible variation of the transition-contact resistances of the transducer upon the accuracy of the measuring devices can be compensated by a suitable selection of transducer-resistances. A considerable margin of freedom with respect to the difficulties mentioned is provided by the use of an automatic bridge, as e.g. of the type EMP -402 (the electric scheme is given). The system of the statistical counting method is applicable to nearly all cases in which the control of means of production is intended to be carried out. Only the transducers must, as the case may arise, be of different construction. There are 3 figures and 2 tables.

10(0) SOV/119-59-2-15/17

AUTHORS: Luk'yanov, N. G., Eygenbrot, V. M., Engineers

TITLE: Automatic Viscometer With Discrete Action (Avtomaticheskiy viskozimetr diskretnogo deystviya)

PERIODICAL: Priborostroyeniye, 1959, Nr 2, pp 30 - 32 (USSR)

ABSTRACT: This device that has been developed in the years 1956-1957 employs the principle of a falling ball for automatic viscosity measurements. The automatic measurement is achieved by putting back the measuring ball, after it has reached the lowest point, into the original position, by means of a geared pump built into the gage tube. As soon as this position is reached the pump stops automatically and the ball begins to sink in the medium now no longer agitated. The viscosity measurement is based upon measuring and recording the falling time of the ball between two test points in the gage tube consisting of a non magnetic material. The measuring head of the viscometer comprises two inductance coils wound over the gage tube. The position of the coils gives the points between which the falling time is measured. Each coil has a primary and a secondary winding which are

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connected through a differential transformer circuit. At the moment the ball passes one of the coils a signal which marks the beginning of the measuring time in the indicator is released in the entire electric measuring system.

When the ball passes the second mark (coil) the same reaction occurs. To prevent a local temperature rise of the gage tube and to reduce the influence which the magnetic field generated by the coils exercises on the ball, the coils are supplied by 12 V, in special cases by 2 v only. The kind of information given by the measuring head permits the use of different indicating instruments. For simple cases the use of the electric stop watch type MES-54 is recommended. The electric bridge type MS-1 may but also be used for indication. This method is dealt with in detail. Long lasting investigations showed the following results: the apparatus developed works for 500 hours without any error. A measuring cycle for viscosities of from 1800 to 10000 centipoise lasts 3 minutes. Stabilization of the ball dip line is obtained by inclining the gage tube by 3-4° to the vertical. The accuracy of reading is ±3%.

Automatic Viscometer With Discrete Action SOV/119-59-2-15/17

Ye.Ya. Klochkov, E. Ya. Livshits, V. M. Kuchenkov, and V. G. Dandre took part in developing this apparatus. There are 3 figures and 5 Soviet references.

ASSOCIATION: NIO PKB-12

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LUK'YANOV, N.G.; OSKOLKOV, I.O.; SMIRNOV, S.M.

Designing units for automatic control of clocks. Priborostroenie no.10:7-10 O '60. (MIRA 13:11)
(Clocks and watches—Repairing and adjusting)

21352

S/118/60/000/011/008/014
A161/A133

16.9500 (1031, 1121, 1132)

AUTHORS: Luk'yanov, N.G., and Eygenbrot, V.M., Engineers

TITLE: Multichannel control systems with pneumatic automation means

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, no. 11, 1960, 30-33

TEXT: Institut avtomatiki i telemekhaniki AN SSSR (The Institute of Automation and Telemechanics of the Academy of Sciences of the USSR) is developing pneumatic control elements with relay characteristics. The authors suggest several possible designs of such control systems called "ПМСАР" (PMSAR). The system in fig.1 has a pulse generator (ГИ), a commutator (К) being a ring bus calculating circuit consisting of pneumatic relay elements, and a regulator (Р). The commutator output circuits are controlling the pneumatic relays placed in the line of every controlled object. Examples of the elements such as the ring bus circuit, the pneumatic relays and so on, are not new, and the fabrication of a pulse generator presents no difficulties. No verified data are yet available for determining the

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